

# IOWA Department of REVENUE

## Iowa Leading Indicators Index May 2013 Report

Tax Research and Program Analysis Section

Released July 2, 2013

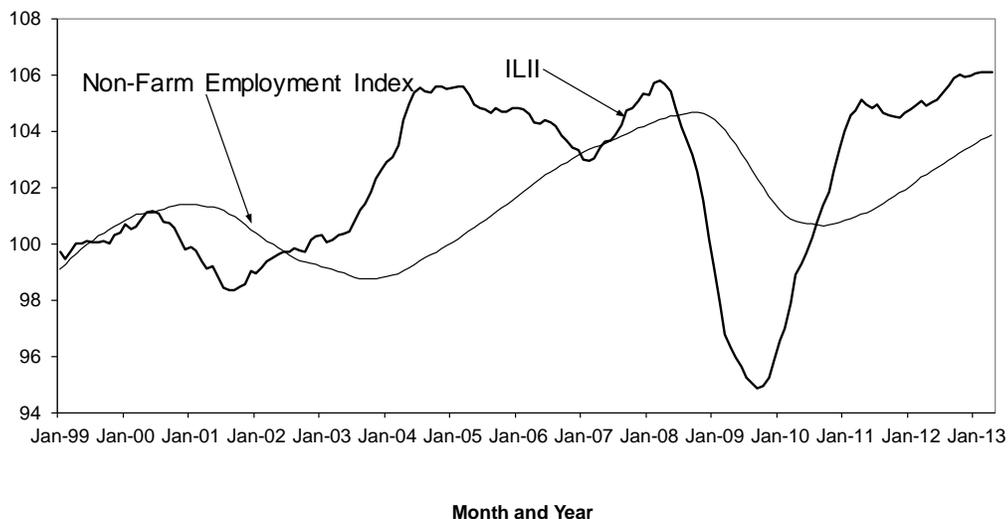
The Iowa Leading Indicators Index (ILII) increased to 106.4 (100=1999) in May 2013. The Iowa non-farm employment coincident index recorded a 0.12 percent rise in May, which extends the streak of employment gains to thirty-two consecutive months.

The ILII's value rose in May after holding steady from January through April at 106.1. During the six-month span through May, the ILII increased 0.4 percent (an annualized rate of 0.8 percent). The six-month diffusion index was 62.5 with five of the eight components (residential building permits, average weekly unemployment claims, the national yield spread, diesel fuel consumption, and the Iowa stock market index) experiencing an increase of more than 0.05 percent over the last half a year.

In May, five of eight Iowa Leading Indicators Index components contributed positively. The positive contributors were the Iowa stock market index, diesel fuel consumption, the national yield spread, average weekly manufacturing hours, and the new orders index. Average weekly unemployment claims (inverted), the agricultural futures profits index, and residential building permits all contributed to the index negatively.

**Figure 1. Iowa Leading Indicators Index and Iowa Non-Farm Employment Coincident Index: January 1999-May 2013**

Index (1999=100)



**Table 1. Iowa Leading Indicators Index: Six Month Overview**

Monthly Values	2012	2013				
	December	January	February	March	April	May
ILII	106.0	106.1	106.1	106.1	106.1	106.4
Percentage Change <sup>a</sup>	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%
Diffusion Index <sup>b</sup>	50.0	62.5	56.3	56.3	62.5	62.5
Six-Month Values	June to December	July to January	August to February	Sept to March	Oct to April	Nov to May
ILII						
Percentage Change	0.8%	0.7%	0.5%	0.2%	0.1%	0.4%
Annualized Percentage Change	1.6%	1.3%	0.9%	0.4%	0.2%	0.8%
Diffusion Index	75.0	75.0	62.5	62.5	56.3	62.5

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced June 28, 2013.

a. Percentage changes in the ILII do not always equal changes in the level of the ILII due to rounding.

b. A diffusion index measures the proportion of components that are rising based on the actual changes (not the standardized contributions to the ILII). Components experiencing increases greater than 0.05 percent are assigned a value of 1.0, components that experience changes less than an absolute value of 0.05 percent are assigned a value of 0.5, and components experiencing decreases greater than 0.05 percent are assigned a value of 0.0.

**Table 2. Iowa Leading Indicators Index Components: Six Month Overview**

Component Series Monthly Values <sup>a</sup>		2012	2013				
		December	January	February	March	April	May
AFPI <sup>b</sup>	↓ <sup>c</sup>						
Corn Profits (cents per bushel)		317.4	319.3	319.3	320.0	317.0	317.5
Soybean Profits (cents per bushel)		581.0	588.8	595.2	593.6	580.3	574.7
Hog Profits (cents per pound)		17.7	17.1	16.2	15.2	14.6	15.0
Cattle Profits (cents per pound)		-10.9	-12.3	-13.1	-13.9	-14.9	-16.0
Iowa Stock Market Index (10=1984-86)	↑	75.00	78.87	79.16	81.29	81.98	85.93
Yield Spread (10-year less 3-month)	↑	1.65	1.84	1.88	1.87	1.70	1.89
Residential Building Permits	↓	823	826	832	824	840	837
Average Weekly Unemployment Claims <sup>d</sup>	↓	3,350	3,335	3,315	3,311	3,293	3,297
Average Weekly Manufacturing Hours	↑	40.68	40.69	40.63	40.66	40.65	40.70
New Orders Index (percent)	↑	66.3	65.5	65.0	64.5	65.3	65.7
Diesel Fuel Consumption (mil gallons)	↑	55.04	55.05	55.29	55.37	55.34	55.57

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced June 28, 2013.

a. For all component series except for the yield spread and the Iowa stock market index, the values represent 12-month backward moving averages.

b. The agricultural futures profits index is computed as the sum of the standardized symmetric percent changes in the four series, each weighted by the commodity's annual share of Iowa cash farm income (updated August 28, 2012).

c. Arrows indicate the direction of the series' contribution to the ILII for the latest month.

d. Changes in average weekly initial unemployment insurance claims are inverted when added to the ILII, thus a negative change in the series contributes positively to the index.

## ILII Components

- **Iowa stock market index:** Capitalization-weighted index of 34 Iowa-based or Iowa-concentrated publicly-traded companies. During May 2013, 28 of the 34 companies gained value, including 9 of the 11 financial-sector companies. The stock market index rose to 85.93, contributing 0.08 to the ILII value.
- **Diesel fuel consumption:** Number of taxable gallons of diesel fuel sold in Iowa. Changes are calculated based on a 12-month moving average. Diesel fuel consumption increased 5.0 percent between May 2012 and 2013, causing the 12-month moving average to rise to 55.57 million gallons from 55.34 in April, and contributing 0.08 to the ILII value.
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury notes. During May, the yield spread increased to 1.89 percent as the long-term rate rose 17 basis points and the short-term rate fell 2 basis points. For the month, the yield spread contributed 0.06 to the ILII.
- **Average weekly manufacturing hours:** Weekly average of hours worked in the manufacturing sector in Iowa. Changes are calculated based on a 12-month moving average. For May 2013, this component contributed 0.03 to the ILII value after increasing to 40.70 from 40.65 in April. May 2013 hours were 41.3 compared to 40.7 hours in May 2012 and an historical average of 41.4 (1996-2008).
- **New orders index:** Diffusion index measuring the share of purchasing managers in Iowa reporting increases in orders received for manufacturing output. Changes are calculated based on a 12-month moving average. In May, the monthly value of the index fell from 77.9 in April but rose from 69.5 a year ago to 75.3. The 12-month moving average of the new orders index rose to 65.7, contributing 0.03 to the ILII.
- **Average weekly unemployment claims:** Weekly average of initial claims for unemployment insurance in Iowa. Changes are calculated based on a 12-month moving average and are inverted when added to the ILII. This component contributed 0.00 to the ILII value. The 12-month moving average of claims rose to 3,297 with unemployment claims for the month 1.7 percent above May 2012 claims, but 21.3 percent above average historical claims for May (1987-2008).
- **Agricultural futures profits index:** Composite measure of corn, soybean, hog, and cattle expected profits, measured as the futures price less estimated breakeven costs, weighted by the respective share of Iowa annual cash receipts. Changes are calculated based on a 12-month moving average. During May, this component contributed -0.01 to the ILII value. Expected profits rose slightly for corn but fell for soybeans. Compared to last year, corn prices are up 8.3 percent and soybean prices are up 1.3 percent. Despite the increase in soybean prices, further declines were seen in expected profitability. Expected profits increased moderately for hogs but declined for cattle. Hog prices rose 10.6 percent and cattle prices rose 3.5 percent over last year.
- **Residential building permits:** Number of total permits issued in Iowa for the construction of residential housing units. Changes are calculated based on a 12-month moving average. For May, this component contributed -0.02 to the ILII with the 12-month moving average decreasing to 837. May 2013 permits were 3.6 percent below the number of permits issued in May 2012, and 16.5 percent below the historical average for May (1998-2008).

**Table 3. ILII Components and Standardization Factors for FY 2013**

---

Iowa Leading Indicator Index Components	Standardization Factor
Agricultural Futures Profits Index	0.049
Iowa Stock Market Index	0.018
Yield Spread	0.328
Building Permits	0.036
Average Weekly Unemployment Claims	0.033
Average Weekly Manufacturing Hours	0.284
New Orders Index	0.063
Diesel Fuel Consumption	0.188

---

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced August 28, 2012  
The standardization factors are the inverse of the standard deviation of the month-to-month changes in each component over the January 1999 to June 2012 period. These factors equalize the volatility of the contribution from each component and are normalized to one. The month-to-month changes are based on 12-month backward moving averages for all components except the yield spread and the Iowa stock market index. The yield spread and new orders index changes are simple arithmetic changes; month-to-month changes for the rest of the components are computed as symmetric percentage changes. The factors are updated annually during August.

### Comments

The Iowa Leading Indicators Index (ILII) is designed to forecast the future direction of economic activity in the state of Iowa. The techniques used to build the ILII follow those used by The Conference Board to construct the national Leading Economics Index (LEI) prior to the 2001 revisions. A one-month movement in such an index does not produce a clear signal, rather it is necessary to consider the direction of the index over several consecutive months. A contraction signal in the ILII is considered reliable when two conditions are met: 1. The index declines by at least two percent over a six month period (using an annualized rate); and, 2. A majority of the individual components decline over those six months (the six-month diffusion index less than 50.0).

The Iowa non-farm employment coincident index measures the change in non-seasonally adjusted, total non-farm employment in the state of Iowa. Changes are based on a 12-month moving average of employment and are computed as symmetric percentage changes. The index is a representation of overall economic activity in Iowa.

The employment index and the ILII are constructed to have a value of 100 in the year 1999.

**Contact:** Questions can be addressed to Victoria Daniels of the Iowa Department of Revenue at (515) 281-8450 or Victoria.Daniels@iowa.gov.